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ABSTRACT

The effect of student mobility on achievement on the High School Proficiency Test (HSPT), a state-mandated graduation test in New Jersey, was studied. Students in a small urban district in metropolitan New York City frequently transfer into and out of the district or between schools within the district. The research was conducted in an urban high school with a total enrollment of 1,628. The sample consisted of 315 tenth graders who had taken the HSPT in April of 1986. Seven hypotheses were tested with respect to mobility, school, and home factors that may affect student achievement and influence student performance on the HSPT. Student transcripts provided some of the study data. The results indicate that: (1) mobility has little effect on achievement when other school and home factors are held constant; and (2) a large set of complex social conditions affects student performance including language proficiency, behavior, and attendance. (TJH)

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Mobile Students and Statewide Testing:  
A Contextual Influence on District Performance

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Research for Better Schools

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In many states, policy makers are raising standards through reform legislation. These actions are often spurred as much by political motives as they are by genuine interest in improving education (Madaus, 1985). Furthermore, both states and local districts are being held accountable for student outcomes. As a result, states have adopted measures to document student achievement and ensure higher standards. For example, many states have instituted mandated testing programs in an attempt to evaluate student progress and judge district performance. Often the tests are accompanied by built-in sanctions or rewards associated with specific levels of test performance. To date, little empirical research has been conducted to assess either the intended or unintended consequences of these reform initiatives (Corbett and Wilson, 1987).

When universal standards such as these are applied across all districts and to all students, little concern is given to the particular local context in which the reform or testing program operates and the effects it has on the students and districts who do not meet the new standards. With this increasing reliance on test results as a means of accountability, researchers caution that educators should "deal fairly and completely with the data on student achievement" (Scollay and Everson, 1985: 207). They suggest that data be disaggregated to take into account some of the important contextual variables which influence performance.

One factor to consider in the disaggregation of test data is student mobility rates. Even with the most sophisticated quantitative/qualitative assessment system, it is difficult to

accurately judge school impact when the achievement test population contains a large proportion of transient students. The greater the percentage of transient students the greater the negative impact on aggregate test scores. In these situations, poor performance is not so much a function of poor instruction, but rather is attributable to the lack of opportunity for some students to be exposed to the curriculum. Scollay and Everson (1985) argue that disaggregating the data into stable and mobile groups produces clearer and more accurate pictures of student progress in schools.

This study was designed to investigate the effect of student mobility on performance on the High School Proficiency Test (HSPT), a state mandated graduation test in New Jersey. A small urban district in the metropolitan New York area with a significant number of transient/mobile students served as the site for this research. The students in this city frequently transfer into and out of the district or between schools within the district. In addition to investigating the effects this mobility has on HSPT performance, a set of other factors related to HSPT outcomes was also examined.

#### Mobility Related Research

The average child today is likely to change school several times during the course of his/her first twelve years of education (Smardo, 1979). In many urban areas school transfers occur at astonishingly high rates with some children transferring several times during one school year. Furthermore, today's

students are more likely to experience significant discontinuities in their environmental settings as they shift schools. Changes in peer groups, neighborhood and community environments, and even family composition more often than not accompany a change in the child's school setting. Transfers can create problems not only for the students but also for administrators and teachers in districts with high mobility who must adapt their schedules, teacher loads and finances to deal with the constant turnover of children. Trying to keep track of these children can create record keeping nightmares.

Despite this ever growing phenomenon, there have been few studies done recently that investigate the causes of this transiency and the effects it has on the child's achievement and attitude toward school. Even fewer studies outline the steps schools can take to ease the child's transition to the new school, or suggest measures schools can take to control or at a minimum accurately document school turnover rates.

Numerous studies were done in the 1960's and 1970's that examined the effect of mobility on student achievement. Of these early studies, some concluded that mobility had no effect on achievement (Bollenbacher, 1962; Moore, 1966; Gilchrist, 1968; Cramer, 1970; Black, 1975); others concluded that mobility negatively impacted achievement (Levine, 1966; Frankel, 1967; Morris, 1967; Frazier, 1970); and still others concluded that it had a positive impact (Wise, 1971). Whalen (1973) concluded that mobility had a different effect on different students. High IQ students with high mobility experienced increased achievement

while low IQ students with high mobility had lowered achievement.

The discrepancy of the findings may be due in part to varying study designs. Some studies examined inner city/low income students. Others were conducted at rural or suburban sites. Some controlled for SES and IQ while others did not. Many studies examined some combination of factors including the number of moves, the recency of the moves, the distance moved, and the grade in which the move occurred. The differing samples, procedures, and hypotheses make it difficult to generalize about the findings and the relationship of mobility and achievement. Even when comparing studies which control for similar factors there is still no consistency in the results. Lacey (1979) cites research done by Bourke and Naylor (1971) who reviewed 28 mobility studies in which many related variables had apparently been controlled. They found the following conflicting results for the effects of mobility on achievement: eleven studies showed mobility had no effect on achievement, twelve showed lowered achievement and five higher achievement. In short, there is no conclusive evidence about the effect of mobility on achievement.

One factor which is overlooked in most studies is the reason for the mobility or the type of transfer. Examining the cause or type of mobility may provide useful insights in explaining the effects of mobility on student achievement and may account for the lack of conclusive evidence in previous studies. Black (1975) was one of the few researchers that examined the pattern of movement, (i.e. students transferring in and out of the same school or to new schools) in addition to the grade of transfer

and the type of school attended. However, since Black sampled 6th graders, he excluded any moves that took place in middle school or junior high -- a time which psychologists suggest children may be more sensitive to relocations (Tooley, 1970; Bayer, 1982). In addition, Black's same school/new school dichotomy did not distinguish between transfers that took place within the same district or state versus those with neighboring districts or states.

The study reported in this paper attempts to overcome some of the limitations of the past research on mobility and student achievement and at the same time investigates the relationship between mobility and student performance on the state mandated graduation test.

### Study Design

Seven hypotheses were tested with respect to mobility, school, and home factors that may affect student achievement and influence student performance on the HSPT. The first three hypotheses were related to the effects of mobility on HSPT performance. The next two hypotheses were related to the effects of school factors and the final two were related to the effects that home factors would have on HSPT performance.

### Mobility Factors

- H1: The greater the number of consecutive years the student is enrolled in the same school district, the better the student's HSPT performance.
- H2: The fewer the number of transfers, the better the student's HSPT performance.
- H3: The shorter the distance of the transfer (transfer type) the better the student's HSPT performance.

### School Factors

H4: The higher the student's average 9th grade attendance, the better the student's HSPT performance.

H5: The better the student's classroom behavior, the better the student's HSPT performance.

### Home Factors

H6: The student with both parents present in the household will have better HSPT performance than the student from a single parent home.

H7: The student from a home where some English is spoken will perform better on the HSPT than a student from a home where no English is spoken.

The research was conducted in an urban high school with a total enrollment of 1,628. The transcripts of the tenth graders (Class of 1989) were selected for the sample since they were the first class required to pass the HSPT in order to graduate. The following information was taken from the students' transcript files from kindergarten to ninth grade.

- family situation (single vs. two parent homes)
- language spoken at home
- number of address changes
- attendance data by grade
- transfer data by grade (to and from the district)
- number of transfers per year
- behavior data
- performance data (CAT, IQ,<sup>1</sup> and HSPT)

### Dependent Variables

All New Jersey high school students are required to pass the High School Proficiency Test, HSPT, to graduate. The test assesses student basic skills in the three content areas of

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1. We were only able to collect IQ data on 140 students in the sample almost all of whom had taken the IQ test in the 4th grade. This means that we only had IQ data on the stable portion of the sample; the students that had been in the district since the 4th grade. For this reason we were not able to use IQ as a variable in any of our analyses.

reading, writing, and mathematics. According to New Jersey's high school graduation law, students must receive a passing score on each section of the test to obtain a diploma. Passing scores for the test administered during the 1985-86 school year were 75 percent correct for reading, 77 percent correct for writing, and 61 percent correct for math. The test is initially administered in ninth grade; students failing any of the sections have the opportunity to retake those section in subsequent years (one retest annually). In addition, the state had provided both funds and special programs to districts for supplemental compensatory education aimed at those students who fail sections of the HSPT.

Our sample consisted of 315 tenth graders who had taken the HSPT in April 1986.<sup>2</sup> The district had 65 percent of its students passing the reading section of the HSPT, 50 percent passing math, and 56 percent passing writing. Only a third of the students passed all three sections of the HSPT.

### Independent Variables

Approximately 70 percent of the students came from a two parent household while 30 percent lived with one parent or other relatives (see Table 1). Data on the language spoken at home were available for over two-thirds of the sample and of that portion, slightly more than a third spoke only Spanish or another foreign language at home, and another third spoke only English at

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2. The total tenth grade enrollment was 387. However, we only selected students for our sample who had taken the HSPT in April 1986. The other 72 students in the class were eliminated from the sample because they had not taken the test in April 1986 or their test scores were not recorded on their permanent records.

home. The remainder spoke a combination of English and Spanish or English and another language. Student records indicate that 61 percent had no change of address during their residence in city while 19 percent had moved once and an additional 20 percent had moved at least twice. Fifty-seven percent of the students were absent less than ten days (good attendance), while 43 percent were absent ten or more days (poor attendance).<sup>3</sup>

Table 1  
Frequencies of Independent Variables

<u>Family Situation</u>	<u>N</u>	<u>Percent</u>	<u>Total</u>
Two Parents	210	70	301
Other	91	30	
<u>Language at Home</u>			
Only English	81	35	231
English + Foreign Language	63	27	
Only Foreign Language	87	38	
<u>Address Changes</u>			
Zero	181	61	296
One	57	19	
Two or more	58	20	
<u>9th Grade Attendance</u>			
Good (95% and above)	177	57	311
Poor (below 95%)	134	43	
<u>Classroom Behavior</u>			
No I's or U's	50	26	191
Less than 1 I or U/year	74	39	
1 or more I's or U's/year	67	35	

Behavior data for each student were taken from a work habit and social development grid on their transcript file (see example below). Data were available for each year students were enrolled

3. Some of this background data was not available for the portion of the sample that transferred into the district from parochial schools. In addition, the accuracy of some of the data such as family situation is questionable since elementary schools may not have updated this information regularly.

in the district prior to high school.<sup>4</sup> Students were given a rating of either S - satisfactory, I - improvement needed, or U - unsatisfactory in eight categories such as: follows school rules, is cooperative, is courteous, completes work on time, respects property of others, and produces neat careful work. On the average, seven years of behavior data were available for each student. Twenty-six percent of the students had no improvement needed (I) or unsatisfactory (U) grades and 39 percent had less than one per year. Thirty-five percent had one or more I's or U's per year.

EXAMPLE:

Work Habits & Social Development

	K	1	2	3	4	5	6	7	8
<u>Is Self Reliant</u>	S	S	S	S	I	I	S	S	S
<u>Follows School Rules</u>	S	S	I	S	U	S	S	S	U
<u>Is Cooperative</u>	S	S	S	S	S	S	I	S	I

S - Satisfactory    I - Improvement Needed    U - Unsatisfactory

While we did not collect data on the socio-economic background of individual students, we did examine the socio-economic status of the community by using 1980 U. S. Census data (Auer, Lahr, Doctor 1978). Using a nonparametric statistical test we determined that there is no significant variation in mean household income across the eleven census tracts in the city. This indicates that the socio-economic status of the community is fairly homogeneous and therefore SES is unlikely to be a key

4. To control for the varying number of years of behavior data available for each student we added the number of I's and U's received and divided that sum by the years of behavior data available.

factor in analyzing our sample of students.<sup>5</sup>

### Student Mobility

This section describes the phenomenon of mobility in the district. Mobility was measured in three ways: by the type of mobility, the number of moves, and the number of consecutive uninterrupted years in the district. Table 2 represents the number of consecutive years students were enrolled in the district. One third of the sample had been enrolled in district schools from kindergarten to 9th grade. More than half of this group made no within district transfers, indicating a very stable population. Fifteen percent entered the district during elementary school (between 1st and 4th grade)<sup>6</sup>, while seventeen percent entered during middle school (between 5th and 8th grade). The remaining 36 percent enrolled the district in 9th grade (see Table 2). In this latter category, 75 percent of the new 9th grade enrollees were from the local parochial school system.

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Table 2 About Here  
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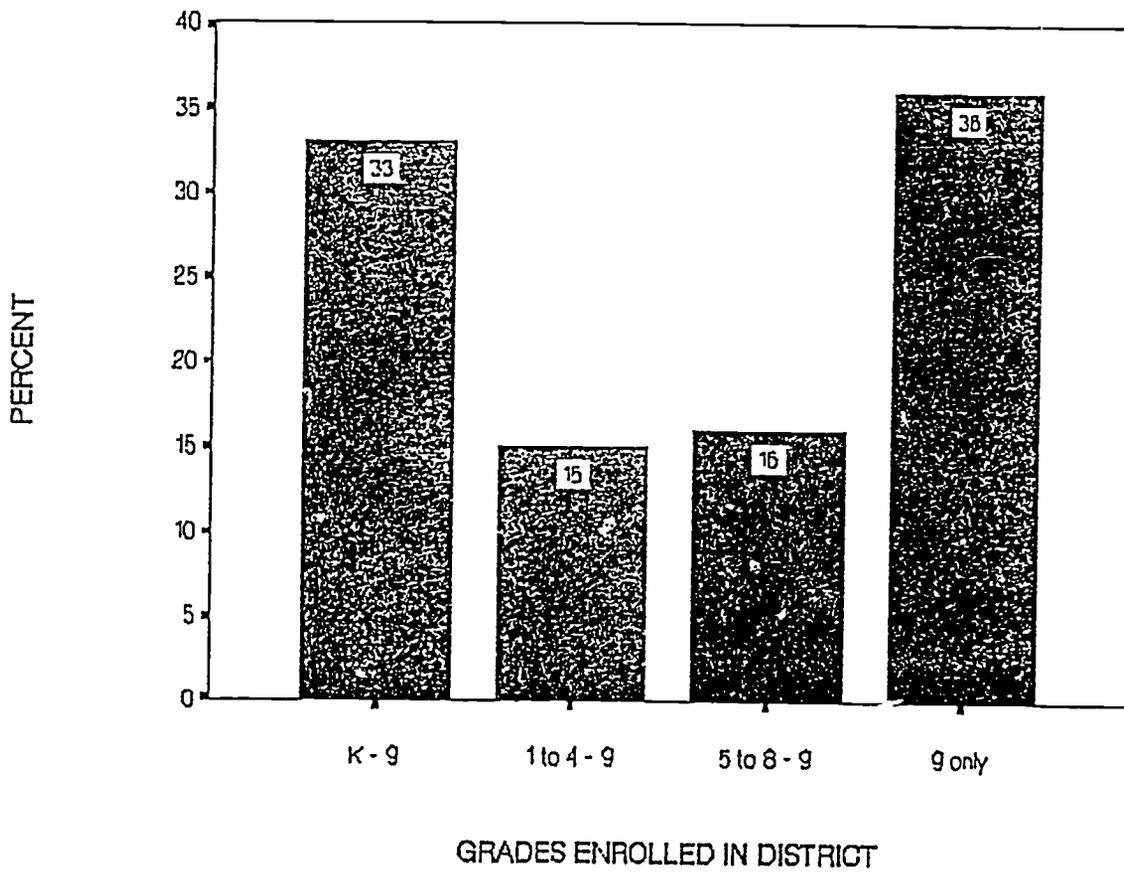
Student transfer data were also analyzed by the frequency of

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5. Using the mean household income for each of the eleven tracts, we randomly assigned each tract to one of two groups and performed the Mann-Whitney U Test (Siegal, 1956) to determine if there were significant differences between the two groups. The results revealed that there were no statistically significant differences between the two groups. Therefore, the community is relatively homogeneous with respect to mean household income.

6. When the category is broken down further the percentages are as follows: 7 percent entered the district in first grade, 1 percent in second, 3 percent in third, and 4 percent entered in the 4th grade.

**Table 2**  
**Number of Consecutive Years of Enrollment in the District**



the moves (see Table 3). Twenty-six percent of the students had no transfers. Fifty-seven percent had only one transfer. Half of the students with only one transfer are those students entering the district in the 9th grade from parochial schools. The remaining 17 percent of the sample had two or more transfers.

Table 3  
Number of Transfers per Student

<u>Number of Transfers</u>	<u>Number of Students</u>	<u>Percent</u>
Zero	81	26
One	179	57
Two or more	55	17

Two examples from the sample of frequent transfers help illustrate the pattern. Student A had a total of five transfers between kindergarten and 8th grade. Student A transferred once within the district in kindergarten and twice in and out of the country the same year. The same student transferred twice within the district in 8th grade. Student A's HSPT scores were as follows: reading 64, math 35, and writing 74. Student B had a total of six transfers between kindergarten and 8th grade. He had four transfers within the district in the third grade and two transfers in the 7th grade with a neighboring school district in New Jersey. Student B also had low HSPT scores: reading 64, math 28, and writing 72. While these two cases are extreme examples of transient students in the district, they help illustrate the potential for disruptive effects on student learning.

Finally, student mobility was measured by the type of transfer. There were five different types of transfers among students in our sample (see Table 4). Seventeen percent of all

the transfers occurred within the district. Twelve percent occurred from or to another New Jersey district, usually one adjacent to the district; 8 percent of the transfers were from or to another state, 28 percent from or to another country; and 35 percent from or to parochial schools.

Table 4  
Types of Transfers

Type	IN		OUT		TOTAL	
	N <sup>7</sup>	Percent	N	Percent	N	Percent
Within District	n/a		n/a		49	17
Another N.J. District	28	10	6	2	34	12
Another State	17	6	5	2	22	8
Another Country	61	22	17	6	78	28
Parochial Schools	94	33	5	2	99	35
Total Number of Transfers					282	100

#### Factors Related to HSPT Performance<sup>8</sup>

Describing the nature of the student mobility (e.g. the frequency, type, and timing) in the district was only the first stage of the data analysis. The second step was to determine if mobility and other school and home factors had any effect on the students' performance on the HSPT. Initially, we performed a simple bivariate analysis, examining the individual relationship between each variable and HSPT performance. Of the seven factors

7. The N's in this table are the number of transfers not the number of students.

8. From this point on the parochial school students were eliminated from the analyses. There are several reasons for this decision. First, data on family situation, language at home, and classroom behavior were not available for parochial school transfers. Since they transferred into the district in the 9th grade, no information on their elementary school years was recorded in their permanent record. Second, there is no information on their transfers during elementary school. Consequently, parochial school transfers were excluded from these analyses since they were not necessarily typical of the students in the school district.

hypothesized to be related to HSPT performance some proved to have a stronger relationship than others (see Table 5).

Table 5  
Significant Statistical Relationships<sup>9</sup> between  
HSPT Results and Mobility, School and Home Factors

<u>Mobility Factors</u>	<u>HSPT Mean Scores</u>			
	<u>N's</u>	<u>Reading</u>	<u>Writing</u>	<u>Math</u>
<u>Years in the District</u>				
<u>Signif. Stat. Relat. to HSPT</u>		<u>Yes</u>	<u>Yes</u>	<u>No</u>
K-9	102	77.3	77.7	62.6
1,4-9	41	77.5	77.1	60.7
5,8-9	44	71.0	71.8	59.8
9th only (not parochial transfers)	31	65.8	68.0	54.9
<u>Number of Transfers</u>				
<u>Signif. Stat. Relat. to HSPT</u>		<u>Yes</u>	<u>Yes</u>	<u>No</u>
Zero	81	77.6	78.3	63.8
One	92	73.2	73.2	59.7
Two or more	45	71.2	72.9	56.7
<u>Type of Transfer</u>				
<u>Signif. Stat. Relat. to HSPT</u>		<u>Yes</u>	<u>Yes</u>	<u>Yes</u>
Within District	48	75.3	74.2	59.4
Within U.S.	45	78.2	76.7	61.3
Out of the Country	59	64.7	68.9	54.8
<u>School Factors</u>				
<u>9th Grade Attendance</u>				
<u>Signif. Stat. Relat. to HSPT</u>		<u>Yes</u>	<u>No</u>	<u>Yes</u>
Good (95%+)	126	76.4	75.7	62.9
Poor (<95%)	92	77.6	74.1	57.4
<u>Classroom Behavior</u>				
<u>Signif. Stat. Relat. to HSPT</u>		<u>Yes</u>	<u>Yes</u>	<u>Yes</u>
No I's or U's	50	78.7	78.6	70.8
Less than 1 I,U/year	74	77.1	76.7	62.2
1 or more I,U/year	67	71.6	73.5	54.7
<u>Home Factors</u>				
<u>Family Situation</u>				
<u>Signif. Stat. Relat. to HSPT</u>		<u>No</u>	<u>No</u>	<u>No</u>
Two Parents	137	74.5	75.1	61.0
Other	78	74.2	75.4	60.2
<u>Language at Home</u>				
<u>Signif. Stat. Relat. to HSPT</u>		<u>Yes</u>	<u>Yes</u>	<u>Yes</u>
Some English	124	79.0	77.8	64.8
No English	82	67.4	70.6	54.3

9. The relationships were considered significant at  $<.05$ . The relationships were determined using a Pearson's correlation for the continuous variables, t-tests for dichotomous variables, and anovas for ordinal variables.

### Mobility Factors

The first hypothesis stated that the longer the student was enrolled in the same school district the better the student's performance. When the sample is divided into the following categories: students enrolled from K through 9th, students who transferred into the district between 1st and 4th grade and stayed through 9th, students who entered between 5th and 8th and stayed through 9th, and those who entered the district in 9th grade, there was a significant relationship between the number of years a student has been in the district and their performance on the HSPT. Students who had been in the district longer did better on the reading and writing sections of the HSPT, but not on the math section.

When examining the mean HSPT scores by these categories, there was little difference in the mean scores of those students who entered in kindergarten and those who entered between the first and fourth grades and stayed through 9th (see Table 5). That is, students who entered the district by fourth grade do better on the HSPT than those who entered sometime after the fourth grade.

The mean scores were three to eleven points lower on all sections of the HSPT for students who entered the district after the fourth grade compared to those who enrolled prior to 4th grade. This difference was particularly dramatic (11.5 points) when comparing the reading scores of students who had been in the district from K-9th grade to students who entered in 9th grade. This may be attributed to the fact that most of those

transferring into 9th grade were coming in from out of the country.

The second hypothesis stated that the fewer the number of transfers the better the student's performance. The number of transfers per student did have an impact on the reading and writing sections of the HSPT but not on math. Students who had no transfers had mean scores from four to seven points higher than students who had transferred.

The third hypothesis stated that the shorter the distance of the transfer (type of transfer) the better the student's HSPT performance. The type of transfer is significantly related to performance on all sections of the HSPT. For this analysis the types of transfers were collapsed into three mutually exclusive categories: those within the district, those within the U.S., and those out of the country. Examining the mean HSPT scores, transfers within the U.S. (those with neighboring districts or states) had the least negative effect on HSPT performance followed by transfers within the district. Transfers out of the country had the greatest negative impact on test performance. The mean scores of the within U.S. transfers were about two points higher than the within district transfers and eight to thirteen points higher than the out of country transfers.

#### School Factors

The fourth hypothesis explored the effect of 9th grade attendance on student performance. The results indicate that there is not an easily defined relationship between attendance and HSPT performance. Attendance in the 9th grade was related to

HSPT performance on the math and reading sections of the test but not writing (see Table 5). Those students with better attendance in high school were likely to do better on these two sections of the HSPT than those with poor attendance. That relationship, while statistically significant, was not very strong. The mean scores for students with good attendance were about two points higher in writing and about five points higher in math. In reading the mean scores was actually 1 point lower for students with good attendance.

The fifth hypothesis stated the better the student's classroom behavior, the better the student's performance. Classroom behavior was measured by the number of improvement needed (I) and unsatisfactory (U) grades on the work habit and social development grid divided by the number of years of behavior data available. Classroom behavior proved to be related to HSPT performance. Students with better behavior records had a higher incidence of passing the HSPT than those students with poor behavior. The students with no I's or U's had mean scores from two to sixteen points above the mean scores of students with I's or U's.

#### Home Factors

The sixth hypothesis stated that students with both parents present in the home will have better HSPT performance. Family situation did not seem to make any difference at all in students' performance on the HSPT. Students from one parent households scored as high on the HSPT as students from two parent households.

The seventh hypothesis stated that students from homes where some English is spoken will perform better than students from homes where no English is spoken. This final factor, language spoken in the home, did have an impact. Students from homes where at least some English is spoken did significantly better on all three sections of the HSPT than students from households where no English is spoken. The mean scores of students from English speaking households were about seven to twelve points higher on the HSPT than the mean scores of those from non-English speaking homes.

While the bivariate analysis described above is interesting, it does not provide the full picture since the findings do not consider the effect of one variable while controlling for the effects of the other variables. A multi-variate analysis was introduced to understand these more complex relationships. Regression equations for each section of the HSPT were calculated using the seven independent variables discussed in the hypotheses. Results from these analyses are presented in Table 6.

Table 6  
Standardized Regression Coefficients for HSPT  
Results with Mobility, School and Home Factors  
(N=185)

Independent Variable	Dependent Variable		
	HSPT Reading	HSPT Writing	HSPT Math
<u>Mobility Factors</u>			
Years in the District	.057	.121	.126
Number of Transfers	.007	-.086	-.119
Type of Transfer	-.124	-.044	-.092
<u>School Factors</u>			
9th Grade Attendance	.235**	.101	.196**
Poor Behavior	-.157*	-.249**	-.265***
<u>Home Factors</u>			
Family Situation <sup>10</sup>	.075	.035	.057
Language at Home <sup>11</sup>	.254***	.157*	.223**
R <sup>2</sup>	.22	.18	.23

\* p < .05  
\*\* p < .01  
\*\*\* p < .001

These multivariate regression results suggest that the mobility factors (years in the district, number of transfers, and type of transfer) have little effect on HSPT results when the other school and home factors are held constant. In the multivariate analysis, none of the factors proved to be significant (see Table 6).

The school factors were significantly related to HSPT performance even when the other variables were held constant. Attendance in the 9th grade was significant at the p < .01 level

10. This was coded as a dummy variable (0,1). If the student had both parents in the household, the dummy variable equalled one.  
11. This was coded as a dummy variable (0,1). If the student spoke at least some English at home the dummy variable equalled one.

for both the reading and math sections of the HSPT, but not for writing. Behavior proved to be related to performance on all sections of the HSPT. The strength of the relationships ranged from  $p < .05$  in reading to  $p < .001$  in math.

Finally, of the home factors, family situation proved to have no relationship to HSPT results in the multivariate analysis, while language at home had a significant relationship with all sections of the HSPT. The strongest relationship was between language and reading ( $p < .001$ ), while the weakest was with writing ( $p < .05$ ).

#### Implications

This study attempted to explore in greater detail than previous studies the relationship of mobility to achievement test performance. Even when the type of transfer was considered in addition to the number and timing of the transfer, mobility still proved to have little effect on achievement when other school and home factors were held constant. Rather, it appears to be a larger set of complex social conditions that effect student performance including language proficiency, behavior, and attendance.

The data suggest that of the seven hypothesized factors, two school factors (behavior and attendance) and one home factor (language) proved to have a statistically significant effect on student HSPT performance when all other variables are held constant. Some of these variables the district can influence; others may fall beyond the district's domain.

### Mobility Factors

While mobility itself proved not to be a strong influence on HSPT performance in this study, in many districts, including the one in this study, mobility is perceived as a problem. This perception may affect the attitudes teachers and district staff have toward the mobile student. This may result in lowered expectations for those students which may in turn affect student behavior and attendance patterns. While this connection is speculative, some experts have provided suggestions to help districts deal with the problem, either real or perceived, of mobility.

Brunk (1982) suggests that frequent within district transfers or "school hopping" can be controlled. She encourages teachers to take the initiative and talk with parents to convince them to keep their child in the same school. Parents often move their "problem child" to new schools because of bad behavior or poor grades. Brunk asserts that moving a child with such problems from school to school can only make matters worse.

Allan and Bardsley (1983) and Smardo (1979) recommend counseling approaches to help students prepare for and adjust to residential moves. While this method may be useful, it assumes that moves are planned well in advance which is not always the case in urban areas where residents move frequently.

### School Factors

There are several areas where districts might be able to concentrate efforts in an attempt to improve test performance. Classroom behavior is one such area for districts to target. In

this study, students with better behavior in elementary schools perform better on the HSPT. Many researchers claim that when poor behavior is correlated with poor performance it is often a symptom of a deeper problem. Poor behavior is often linked to low teacher expectations, for example. This may indicate that students with poor behavior do not receive that same quality of instruction as students with good behavior.

High school attendance is another area which affected performance. The data suggest that there is a relationship between good attendance in high school and higher HSPT results. Making behavior and attendance priorities in a school may help raise performance. By having the students in the school more often and spending more time on task, the students may be better prepared for the test.

#### Home Factors

While home language does not fall directly under the realm of school matters, it is an area that does have an impact on students' performance. School districts could reach out to the community and stress the importance of the relationship between English language proficiency and academic performance. Joint school-community efforts to teach English to adults who are not proficient in English, such as recent immigrants, might also improve student achievement in the long run.

The relationship between mobility and achievement is a complex problem inadequately researched and only partly understood. This study points to an obvious need for improved

record keeping in the schools. One of the reasons mobility may have proved to be unrelated to HSPT performance is that the data on student moves may not have been accurately maintained. Mobility is becoming an important issue in identifying at-risk youth. Schools need a better method to accurately document student mobility; not only for their own information but also to help identify potential at-risk youth for additional assistance.

This study attempted to add to the research on mobility by examining the effect of different types of transfers on student achievement. However, there is still a pressing need for additional studies, for example, on student adjustment to new school environments, and on the relationship between school intake processes and subsequent student adjustment. Sound, reliable data on student mobility is a prerequisite for further research in this area.

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